







PERFECT SMALL PORT WITHIN SAFETY ISSUES AND BEST PRACTICES

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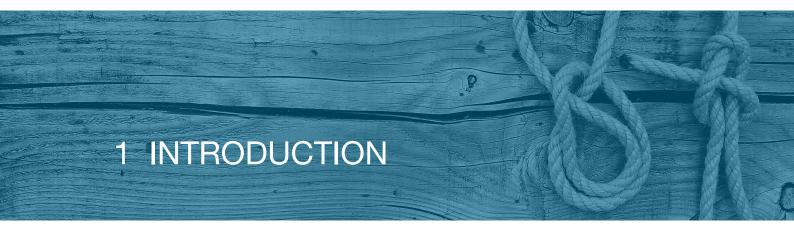
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CONTENTS

1 IN	TRODUCTION	5
1.1 A	About the PortMate project and the pilot ports	5
1.2 5	Study on small port safety	6
	Boating in the Northern Baltic Sea	
2 SA	AFETY OF THE PORT ROUTES	10
2.1 V	Well-marked routes and ports	10
	Port information required in advance	
	PortMate project's safety videos	
3 SA	AFETY IN THE PORT	17
3.1 5	Safety plan	18
3.2 F	Pier safety	20
3.3 F	Rescue equipment	21
3.4 F	First aid equipment	23
3.5 E	Electrical safety	24
	Environmental safety	
	Robbery and vandalism	
4 SA	FETY QUESTIONNAIRE	27
4.1 5	Safety in arrival and departure to/from the port	27
4.2 5	Safety during port stay	29
5 AP	PPLICATIONS PROMOTING SAFETY	31
6 CC	ONCLUSIONS	34
APPE	ENDICES	
Appen	dix 1: Safety questionnaire for boaters (in English)	
	dix 2: Safety questionnaire for port operators (in English)	
	dix 3: Safety questionnaire for boaters (in Finnish)	
	dix 4: Safety questionnaire for port operators (in Finnish)	
	dix 5: Safety questionnaire for boaters (in Swedish)	
Appen	dix 6: Safety questionnaire for port operators (in Swedish)	



Recreational boating is becoming more and more common within the Central Baltic region, and new boaters are accessing the waters and visiting small ports. Common challenges for small ports, especially in the archipelago and islands, are the limitations of safe arrival, stay and departure from the port.

Safety is a daily matter in the boating season for small port operators and boaters. During the years 2016–2019, the PortMate project will enhance safe access, suitable green services and joint marketing in small ports. In this report we are defining what is a perfect small port within safety issues.

1.1 About the PortMate project and the pilot ports

The PortMate project started 1 November 2016, and will last until the 31 December 2019. PortMate is a Central Baltic Programme project, with a priority of well-connected region (P3), and a specific objective of "Improved services of existing small ports to improve local and regional mobility and contribute to tourism development" (3.2). The project is financed by European Regional Development Fund (ERDF) and project partners.

In the Central Baltic Region, there are altogether 19 pilot small ports in the project: five in Rauma, Finland; four in both Kökar and Sottunga, Åland, and three in Söderhamn and three in Gävle, Sweden (see figure 1). In addition to the lead partner of the project, Satakunta University of Applied Sciences in Finland, there are partners from each region mentioned above: City of Rauma, Municipality of Söderhamn, Municipality of Gävle, Municipality of Sottunga and Kökar Havspaviljong Ab.



Figure 1. PortMate project's pilot ports are located in the Baltic Sea area in Finland, Åland and Sweden.

From a boater's point of view, there is a vast variety of small ports in the project. Some of the small ports are situated in the city centre, some near the city, some on islands. Some of the small ports are totally natural ports without any services, and lacking internet connectivity. Ports in the city centre are perfect for boaters who seek plenty of activities, but on the other hand, natural small ports are suitable for boaters that are looking for a quiet small port to stay.

1.2 Study on small port safety

Information in this report has been gathered from various sources – from literature, webpages, and during PortMate partners' meetings, workshops, and discussions. The most important sources of information, nevertheless, were the benchmarking of PortMate small ports in 2016 and 2017, and the safety questionnaires conducted in the Spring of 2017.

The benchmarking of best practices and safety of small ports started from the first partner meeting in Rauma in November 2016, continued in February 2017 in Gävle and Söderhamn and in the spring 2017 in the Åland small ports of Kökar and Sottunga. Benchmarking has been a valuable source of information when preparing this report, since every small port is different. Unsheltered small ports, for example, require continuous weather observation. A good example of unsheltered

small ports is in Toppatal, Söderhamn, where the port is exposed to both wind and swell from any direction from 180° to 360°, due to lack of breakwater or similar nature construction to protect the port from the force of waves (see figure 2). More safety matters to be considered in the port fairways and the ports, are presented in chapters 2 and 3.



Figure 2. Picture of Toppatal, a natural port in Storjungfrun island, Söderhamn, Sweden. Photo by Söderhamn Municipality.

The most significant sources, however, were the PortMate safety surveys conducted in spring 2017 (see attachments). There were two separate questionnaires: one for boaters and one for small port operators. The aim was to find out their opinion on a safe small port. The questionnaires were conducted using e-forms in Finnish, Swedish and English. Over 400 people participated in these brief surveys, even though it was open for answers only for one month. Results of the safety questionnaires are presented in chapter 4.

Because maritime safety is a broad issue, this document cannot cover all the important aspects. Some of the issues that are not included in this report are, for example, the boat registration and regular safety inspections of the boats; emergency communication systems on waters; basic maritime safety gear on board; boat maintenance; boaters' adequate maritime knowledge and skill level for safe boating; markings and maintenance of the official fairways; and operation of different maritime safety authorities (Coast Guard, Police, Customs) and NGOs operating at sea (e.g. Finnish Lifeboat Institution, boating clubs).

1.3 Boating in the Northern Baltic Sea

The archipelagos of Finland and Sweden, and Åland in between, are offering excellent possibilities for boating. There are tens of thousands of islands with thousands of miles of safe waterways on both sides of this unique part of the Baltic Sea.

Boating and especially pleasure boating in this context can be roughly defined as sailing or cruising from one small port to another during the day. A trip can be for example a one-day trip from the homeport to another port and back or spending a night or more in the port and then continuing the journey to the next port. The duration of the boating trips can vary from day trips to a few weeks.

Pleasure boating is a very popular recreational activity in the Nordic countries. Per one thousand inhabitants in Finland and Sweden, there are 96 and 56 owned motorboats and 3 and 10 owned sailboats respectively (Taloustutkimus 2016 & Transportstyrelsen 2010). This is more than in almost any other country in the world. Only in New Zealand pleasure boating is as popular as in the Nordic countries (Sweboat 2015).

According to a survey by the Swedish Transport Agency (Transportstyrelsen 2015), there are approximately 822 000 leisure boats in Sweden of which almost half are small boats, e.g. rowing boats and dinghies. The most common boat in Sweden was a motorboat without overnight accommodation with a motor of at least 10 hp. On the other hand, sailboats and motorboats with the opportunity for temporary overnight accommodation, were the most commonly used, and canoeing, kayaking intended for paddling, dinghy and rowboat, were the least used. (Transportstyrelsen 2015, 15–16, 61.) According to the survey by the Finnish Transport Safety Agency (Askola, Takala & Tefke 2016), there are approximately 1.16 million boats in Finland. Rowing boats are the most common boats followed by motorboats with engines less than 20 hp. The most common uses were day trips and fishing trips, and the most important experiences were the feeling of freedom and being surrounded by nature. Port services, social aspects and comforts on board were less important. (Transportstyrelsen 2015, 86–87.)

Results show, that almost 70% of all boaters in Finland have more than 20 years of experience in boating, 40% have official training in boating, and 15% are members of a boating club. (Askola, Takala & Tefke 2016, 15, 31–32, 36.) Even though Finns are rather experienced in boating, one must remember that accidents happen to all kinds of boaters, ranging from the least to the most competent. The tendency for accidents might even be more likely among the most competent ones, caused by a false sense of security, based on a long period of uneventful experiences (ALL Academy International 2014).

In terms of safety, eight out of ten always carry life jackets, floats or other floating aids for all on board the boat (Transportstyrelsen 2010, 69). According to the Finnish Coast Guard, there are about 2000 yearly contacts to the Marine Rescue Center from the sea area. About 1600 of them need rescue services from the Coast Guard or Lifeboat Institution. (Finnish Border Guard 2017.)

In Sweden, there were 23 fatal boating accidents in 2014, whereas in Finland there were 40 fatal boating accidents in 2015. According to the most recent information, in Finland most of the boating accidents happened at sea (1335/1948 accidents), but most of the fatal accidents happened in the inland waters (28/40). (Sweboat 2015 & Askola et al. 2017).

According to Askola et al. (2016, 43), most of the water traffic incidents were caused by technical error in the steering system or in the engine. Other common causes were human errors, running out of fuel, and unfavourable weather conditions. Statistically, alcohol related water traffic accidents in Finland have decreased to less than half during the years 2007–2015.

2 SAFETY OF THE PORT ROUTES

According to the International Regulations for Preventing Collisions at Sea (COLREGS 1972), a captain of the boat should always take care of his/her boat and crew by following good seamanship, and at all-time taking into consideration the weather, rocks, shoals, speed, visibility, and other boats at sea or in the port area.

Important safety issues related to small ports are the arrival to the port and the departure from the port. In Finland, the waterways are placed in two categories: fairways and boating routes. A fairway is a route, where the operator is fully responsible for the safety of the waterway. A boating route is a shallow channel of lower category, mainly used for a boating or yachting route, where the operator is not held responsible for the route's safety issues. In Sweden, however, the responsibilities for boating routes vary. Moreover, the municipalities in Sweden are responsible for all safety matters regardless of the owner of the waterway or the port.

2.1 Well-marked routes and ports

The depths of the fairways and boating routes should always be checked carefully before entering the port. The municipality may have used official buoys as required for an official sea fairway, but actually the waterway is a boating route on state territory, and therefore it should be marked with aids to navigation that are different from the official ones by their colour (see figure 3).



Figure 3. An unofficial aid to navigation on a boating route in Rauma, Finland. Photo by Markus Savolainen.

The boater must be aware, that the navigation information on a paper and on an electric chart may differ from the reality. The operator responsible for the fairway – Finnish Transport Agency (Liikennevirasto), landlord of a port, municipality operating the small port, or private port operator – should actively take care of the condition of the port's fairway and boating routes.

The Finnish Transport Agency has an online system called Pooki, that includes all official fairway data and boating routes, and their aids to navigation. For instance, there is information about who is responsible for the route in question. All the information is available for a limited audience only, but parts of the information (navigational warnings for seafarers) are published on the website of the Finnish Transport Agency. The Finnish Transport Agency has installed approximately 25,000 aids to navigation along the 16,000 kilometeres of waterways under its management within Finland's sea areas and lakes. The aids to navigation may be of the fixed or floating kind. However, there is no information about the unofficial aids to navigation existing on the boating routes. In Sweden a similar registry exists, and it is managed by the Swedish Maritime Administration.

To avoid misunderstanding, a boater must be aware, that the waterway signs are national. The Finnish and Swedish signs differ from each other, for example, in Finland the speed limit is shown in kilometres per hour, but nearly every other country is using knots. In Finland, there is also a "wave formation prohibited sign", which is not used in Sweden (see figure 4).

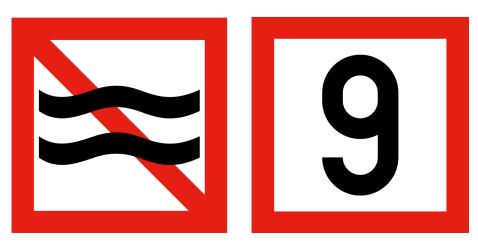


Figure 4. Finnish sign "aallokon aiheuttamisen kielto" (En. wave formation prohibited) and "nopeusrajoitus 9 km/h" (En. speed limit 9 km/h)

Certain high-risk areas in the actual inbound fairway to 19 PortMate small ports will be filmed for the safety videos (see chapter 2.3). However, when enlarging the study area in the safety aspect, there are areas along the Finnish coast to be avoided in certain weather conditions. One good example of these areas is in Rauma, the so called Rihtniemen nokka, a 2.4-meter-deep fairway when approaching Rauma from the south, following the coast line (see figure 5). Due to the quickly shallowing sea, boaters will meet high waves if the seaward wind is blowing more than 12 m/s. For safety and comfort reasons, it is recommended to use an alternative route if the weather conditions are not favourable.

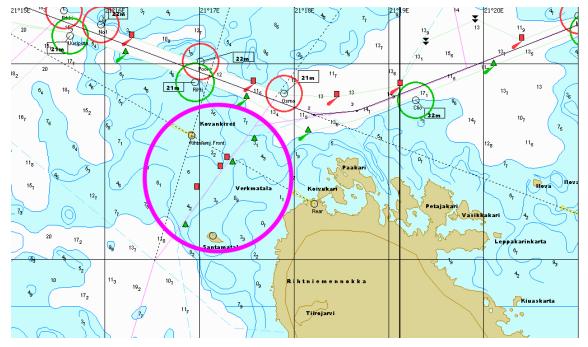


Figure 5. Area in the pink circle ("Rihtniemen nokka" in Rauma, Finland) should be avoided if seaward wind is more than 12 m/s. Picture captured from Transas EDCIS.

There are plans to replace one of the existing buoys with a high-tech buoy that sends online information of the prevailing wave height. The first intelligent buoys are already in test use in the Rauma sea area. In the future, there will be an automatic alarm if a buoy is not in order (see figure 6).



Figure 6. In the future an automatic alarm will be sent from a damaged red lateral mark. Photo by Heikki Koivisto.

2.2 Port information required in advance

In terms of safe access to ports, the scope of the PortMate project is to concentrate on the safety issues, starting from the point where the official fairway ends and the small port fairway to the target port begins.

There are safety aspects which the boater should know beforehand, and information that should be easily accessible for the actual arrival such as:

- How will the boater find the appropriate information about the small port?
- Is the port safe from the waves and wind during the planned stay?
- Are there some restrictions considering your own boat?
- How is the approach route marked?
- Where can you find the guest pier?
- What kind of mooring possibilities are available?
- Is there anything special to take into account?

The departure from the port is much easier than arriving to a new port, because the area is somewhat familiar already. Only in a case when the boater is starting one's trip from an unfamiliar port, for example from the home port of a rental boat, there are similar information requirements for the safe departure as there are for the safe arrival.

Based on the PortMate survey conducted in the Spring of 2017, one of the most important issues related to the port arrival, is the availability of information about the port entrance beforehand, and information about the general services and their locations within the port. The port being sheltered from effects of the waves and wind, was also seen as important, but on the other hand, the issue is already well covered in small ports.

Based on the safety survey, boaters appreciate if the markings are adequate and visible when approaching the port. There should be depth signs on the small port fairway, on the pier and on the berth places, since only this way the boater can properly prepare and make correct decisions for a smooth approach and mooring. The same information should be provided also online. (See figure 7.)



Figure 7. Depth signs in the small port of Poroholma, Finland. Depth information should also be available in advance, e.g. online. Photo by Kristiina Kortelainen.

2.3 PortMate project's safety videos

Currently there are various useful port guide books, such as The Great Harbour Book (Fi. Suuri Satamakirja I–III) by Turun Partio-Sissit ry, a Sea Scout Association from Turku, Finland, but new and more easily accessible information is needed.

The upcoming PortMate project's approach videos are a modern way to share information about the small ports. In these short video clips the video footage of the boat approaching a port is combined with a navigator view. The navigator view shows the moving spot of the boat, and the highlighted small port fairway signs met on the way. Furthermore, various safety related issues, such as speed limits or depth signs, can be highlighted in the video.

In addition to the video footage filmed from the boater's view (see figure 8), drone video gives a bird's-eye perspective of the approach. This view is particularly helpful when close to the port, to show the port entrance and the locations of the guest piers and other services in the port area. A drone photo of approaching Kylmäpihlaja island in Rauma, Finland is shown in figure 9.



Figure 8. Syväraumanlahti, Rauma, Finland. Video footage from the deck of a boat to show the boater's point of view of the safe approach. Photo by Kristiina Kortelainen.



Figure 9. Quadrocopter i.e. drone photo of approaching Kylmäpihlaja Island in Rauma, Finland by Kristiina Kortelainen.

The first safety videos will be available in 2018 from the small ports of Rauma, and filming will continue in the summer 2018 in the small ports of Kökar, Sottunga, Gävle and Söderhamn.

Furthermore, a responsive platform to share the videos and other information is needed. The final product of the PortMate project will be an open access web-based ICT solution, where all these videos and other related material will be available free of charge, for boaters and small port operators in autumn 2019.



When it comes to safety in a small port, it may mean various things. In a safe small port the boats are safely moored, well-anchored and protected against the waves. Piers are reliable and safe to use. Electricity is safely available. A small port has taken actions against possible fire hazards and environmental pollution. Safety equipment is available and in good order.

Many of the leisure ports are on islands or otherwise far away from both hospital or health centre, and rescue department. That is to say, the waiting time for an ambulance, fire service or rescue diver, may take longer than 15 minutes. It is therefore important that the port is prepared for a quick first response. The first minutes after an accident are crucial for both lifesaving and to limit the extent of the material damage. (Riksföreningen Gästhamnar Sverige 2010.)

Small boats typically have only the necessary safety equipment on board, and therefore they depend on the small port's fire extinguishers or medical first aid kits. Also the emergency communication methods are limited in small boats. Usually their only possibility is to use a mobile phone, whereas all large ships and most seagoing small crafts use also Marine VHF radio equipment, which enables long range data communication up to several tens of kilometres. (Riksföreningen Gästhamnar Sverige 2010 & Finnish Border Guard 2017.)

There are some informative booklets available about port safety with handy checklists attached. For instance, Svenska båtunionen (En. Swedish boating union) published a self-assessment guide of recreational boat ports in 2016, and Merenkulkulaitos (En. Finnish Maritime Administration) published a safety instruction for boat ports in 2007. The first mentioned includes a checklist in Swedish, and the second one a checklist in Finnish.

3.1 Safety plan

Every port should have an updated safety plan, especially the ports with 100 or more berth places or with docks longer than 200 meters. The purpose of a safety plan is to help people – port personnel and public – prevent possible abnormal or dangerous situations, and to take proper actions in order to save lives and the property of both boat and port owners. It is recommended to arrange training for the staff, and a safety inspection each year before the boating season commences. The training should include routines describing how the harbour personnel should act in the event of a fire to warn the boaters, alert the rescue service, move the boats away from the fire, and fight the fire. Also the guests should be adequately informed about the port's rescue equipment. (Pidä saaristo siistinä ry 2017 & MSB 2006.)

All small port operators should prepare a safety plan, which takes into account the special characteristics of the small port in question, since every port is different. The safety plan should take into account the size, shape, and location of the small port (see figure 10). Especially the distance to the nearest rescue department is essential. Also the use of the port, whether the port is for example a home port or a guest port, influences the safety plan requirements.

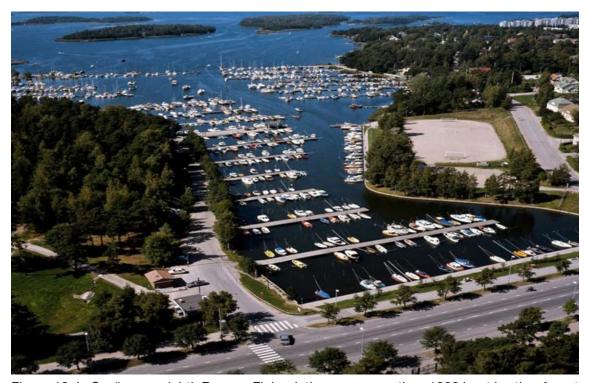


Figure 10. In Syväraumanlahti, Rauma, Finland, there are more than 1000 boat berths. A port safety plan is required. Photo by Municipality of Rauma.

In every small port, there should be an information board at each pier or at the small port office. There should be basic information about the port, such as the port rules and services, the location of the safety equipment, the port operator's contact information, and the coordinates of the small port. The coordinates, e.g. 61°8'40"N, 21°18'10"E for the Kylmäpihlaja small port in Rauma, will be helpful in case of an emergency, as the rescue units will need the exact location to navigate.

When planning a new small port, the port safety must be taken into account. The fuel station should be a safe distance from the moored boats to avoid accidents. There should be enough space for boat manoeuvring, as in the case of a fire, and the small port must be able to fully evacuate. In addition, there must be unrestrained access to any part of the small port, for all rescue units.

If the harbour is a rather big small port, there should also be surveillance, alarming possibility, adequate rescue equipment (e.g. lifeboats), and a procedure to wake up boaters at night (MSB 2006).

3.2 Pier safety

A safe pier is easily taken for granted. A boater should know in advance the height of the pier and the mooring facility – are there buoy, boom or side mooring possibilities in the port (see figures 11–13).

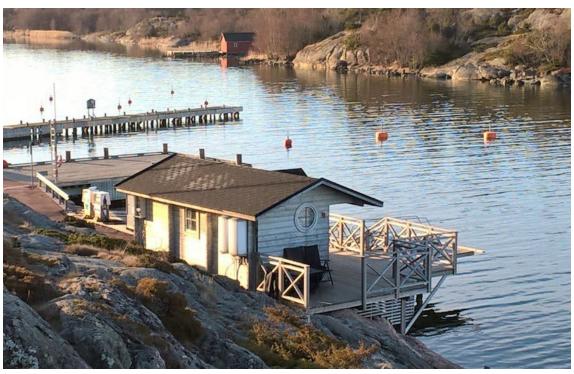


Figure 11. Piers in Kökar Havspaviljong. The boat can be fastened to the pier with a head line, and to the buoy with a stern line. Photo by Heikki Koivisto.





Figures 12 and 13. The berth places are clearly marked in the guest boat pier in Söderhamn, Sweden. Photos by Municipality of Söderhamn.

The pier should be wide enough, a minimum of 2.5 metres, and should have a deck height more than 0.5 metres. From the boater's point of view, the height of the pier is important: a safe pier allows all visitors to get on and off board easily (see figure 14).

A well designed pier has enough buoyancy especially on the sides. Maximum tonnage (persons on pier) should be clearly visible. The surface must be non-slippery. Floating piers must be anchored in a safe manner, and the connection between the floating piers must by checked regularly. The amount of boats for side mooring must be controlled, so that a sudden storm does not cause danger. Moreover, lighting, preferably resource efficient lighting, ensures safe passage in the dark autumn evenings.



Figure 14. Height of a pier is important. Photo by Minna Keinänen-Toivola.

3.3 Rescue equipment

The fire and rescue equipment should be provided on piers, floats and other areas at maximum intervals of 100 metres. It is important that the equipment can quickly be located in case of emergency, so that people can act immediately. The rescue items should be marked uniformly and distinctly (e.g. a white and red-coloured pennant in the rescue station). Preferably the station is lighted, and there is yellow prismatic reflex or fluorescent colour on the bar and the ladder, so that they can easily be seen in both dim light and during night time. (Riksföreningen Gästhamnar Sverige, 2010.)

The life-saving post (see figure 15) must have easily detachable rescue equipment. There should be a lifebuoy with a rescue rope, and rescue ladder (3–4 m) with hooks to hang the ladders on the side of the dock and to enable people to pull a person out of the water. In addition there should be a rescue hook (5 m) with a pull hook, to enable to get a hold of a person afloat. The hook is also used to help a person float to the fixed rescue ladder, or to pick up lost equipment. The hook can also be used on thin ice during the winter.

The biggest risk at a port, where there are boats close to each other, is fire. Especially in a full port fire safety is a very important matter. For example, when a fiberglass boat is burning uncontrollably in the middle of a small port, it is hard to tow the burning boat out from the small port to prevent the fire from spreading (see a Youtube video "Everett Marina Fire 7/8/17" by Tom Thumb). In particular the small ports on islands are challenging for fire brigades. It takes time to get to the island, and therefore often the best solution is well trained, competent personnel and good firefighting equipment on each small port.

To reduce the risk of fire in a boat harbour, there are a number of points that a port operator should consider. Firstly, in order to reduce the risk of the fire spreading, boats should be safely positioned in the dock. In case of fire, it should be possible to move boats quickly away from fire. There should be a fire extinguisher (6–12 kg powder ABC) clearly visible and easily in reach (see figure 16). The bigger the extinguisher, the more it provides increased capacity for larger fires. Additionally, the big extinguishers are less likely to be stolen than the small ones that are typical in the small boats. (Riksföreningen Gästhamnar Sverige 2010 & MSB 2006.)





Figure 15. A life-saving post with a rescue ladder, a long rescue hook and a lifebuoy, in Stockholm, Sweden. Photo by Teemu Heikkinen.

Figure 16. A visibly positioned fire extinguisher in Syväraumanlahti port in Rauma. Photo by Markus Savolainen.

In case of a man afloat at the dock, there should also be rescue grab lines installed on high docks. It is recommended that the rescue grab line is mounted on the side of the dock, approximately 0–30 cm above the average water level. The idea is to help the person in the water to be able to keep oneself afloat until help arrives. In case of large variations in water level, several levels for grab lines may be needed. The grab line should be of visible colour, such as bright yellow. (Riksföreningen Gästhamnar Sverige 2010.)

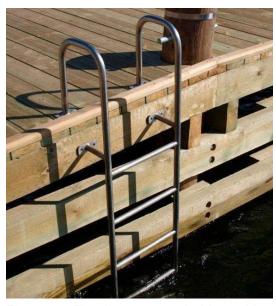


Figure 17. Fixed emergency ladders with a handlebar to ease the climbing. Photo by the Municipality of Söderhamn.

Moreover, the port should have fixed emergency ladders at maximum intervals of 50 metres, preferably 25 metres, on each dock. The lowest steps of the ladder should be at least one meter below the water surface at normal low tide levels, to make it is easier for a frozen and weakened person to get up along the steps. In addition, to ease the climbing, there must be a handlebar at the higher end of the ladders. The bar should be approximately 30–45 cm inwards from the edge, and about 50 cm above the pier surface (see figure 17). (Riksföreningen Gästhamnar Sverige 2010.)

3.4 First aid equipment

It is essential first aid equipment is within reach at all small ports – a first aid kit, and if possible, a defibrillator. A well-equipped first aid kit gives the possibility to treat smaller and larger wounds, i.e. stop bleeding and minimize personal injuries, until the ambulance arrives. A defibrillator may save lives, as each minute after a cardiac arrest reduces chances of survival by 5–10%. (Riksföreningen Gästhamnar Sverige 2010.)

In addition, there should be a phone, fixed or mobile, to enable 112 emergency calls, since it is important to promptly seek professional help after an accident has occurred. A good place to store the equipment is in the small port office or an equivalent place in the port. (Riksföreningen Gästhamnar Sverige 2010.)

3.5 Electrical safety

In recent years, the number of electrical gadgets and devices has increased significantly – and so has the need for electricity. Therefore, it should be possible to plug in to access electricity in all small ports. The port area should be planned so that the outlets are protected by residual current, the extension cables must not cross, and the power stations are dimensioned for one socket per boat (see figure 18). The distribution box must be protected from the weather and wind. When making electrical installations on piers, the wear and tear resistance, and the fluctuation of the water level, must be taken into account. (Svenska båtunionen 2015.)



Figure 18. Well-lit and safe electricity and water posts in Syväraumanlahti, Rauma, Finland. The cables and pipes are installed inside the pier hull. Photo by Kristiina Kortelainen.

Piers and boats carry various sources of electricity. Faulty wiring, or the use of damaged electrical cords and other devices, may cause the surrounding water to become energized. Since there is no visible warning for electrified water, people should avoid going to water near a small port or near a boat while it is running. Unknowingly, many boaters and small port operators place themselves in danger by swimming near electric-powered boats and piers. Electric current in the water causes a paralysis of muscles, which may result in drowning. People should be aware, that as little as 10 milliamps, 1/50th the amount used by a 60-watt light bulb, can cause paralysis. This innocent act of fun may have tragic consequences as electric shock drowning occurs each year. (ESFI 2016.)

Raising awareness among small port operators and boaters, could help to prevent electric shock drownings or other electrical injuries due to a fault current in the water. Additionally, there are electrical safety precautions boaters must follow to ensure the electrical safety of the entire small port. (ESFI 2016.)

It is important that the strong power plant is properly designed to prevent serious accidents and that electrical installation work is always done by professionals. It is recommended that the residual current circuit breakers (RCCB), which can automatically disconnect the circuit whenever a fault occurs, are added to all electrical installations. They protect individuals from the risk of electric shocks as well as electrocution and fire. (Svenska båtunionen 2015.)

Small ports and boatyards are required to have ground-fault protection to help prevent water electrification. When connecting pleasure boat electricity to public power grids at the port, CEE power plugs should be used. The detailed requirements for the land-based connection devices (power outlets) are regulated by the international standard IEC/EN 60309 and the Swedish standard SS 436 40 00. (Svenska båtunionen 2015 & STEK 2015.)

3.6 Environmental safety

Each boater and small port operator must take environmental safety into consideration. A safe port is designed to counteract all possible environmental risks.

Littering in both land and sea is prohibited by law. Many ports are equipped with recycling stations with recycling bins and waste disposal bins, generally for sorting glass, metal and paper. All hazardous waste – e.g. batteries, oil, paint, and distress rockets – should be handled and disposed of carefully. (Pidä saaristo siistinä 2017.) People handling hazardous substances must have sufficient knowledge of the procedures, so that any harm or damage to nature or people can be prevented. Hazardous waste is to be collected and disposed responsibly, and therefore the hazardous waste containers should be clearly marked, as it must not be mixed with any other waste.

Oil leaks may have hazardous consequences in the environment, and therefore a port should always be prepared for possible oil leaks on land or in the water. As a first step, it is recommended that the port has oil-absorbing material that can absorb petroleum spills from both land and water. The best oil booms are made of cellulose or bark. There are 6-meter-long oil booms made of bark, and they can also be linked together, which enables a sufficient use of material as the prevailing situation requires. Bark has the advantage of being reusable: if the oil boom has

not been contaminated, it can be dried and reused. To prevent contaminating the sewage system, the material used in oil absorbing should not be drained into the sewer. (Riksföreningen Gästhamnar Sverige 2010.)

People should be reminded, that also the release of sewage water into waterways is prohibited. All boats equipped with a marine toilet must also be equipped with a sewage pump-out system. The waste is stored in a septic tank, and emptied by using a septic pump in a port. This ensures the sewage is processed at a water purification plant instead of being dumped in the water. (Pidä saaristo siistinä 2017.)

3.7 Robbery and vandalism

There are security measures to reduce theft in ports and boats. Positioning systems (trace search) can track missing boats, by using satellite-tracking technology (e.g. GPS). Hulls and motors should be labelled to help insurance companies. Boats should be emptied of all personal belongings before leaving, and the boater should check that the home insurance covers staying in the boat during weekends and holidays. Any valuable equipment – such as a navigator, a plotter, an autopilot, a VHF radio, a stereo system, expensive binoculars or tools – should not be left in the boat. Instruments attached to the bracket or cassette are not considered to be permanently mounted. All original receipts should be kept in safe storage. (Swedish police n.d.)



A PortMate safety survey was carried out during the Spring of 2017. The survey included questionnaires both for boaters and port operators. Both questionnaires had sections for arrival and departure-related safety issues, port stay-related safety issues and open ended questions.

There were altogether 390 responses to the boater's questionnaire and 56 responses to the port operator's questionnaire. The respondents were from Sweden, Finland (including Åland), Estonia and Latvia.

In the boater's questionnaire, the importance of different safety related issues was asked with the following scale: no importance (1), small importance (2), important (3), very important (4), don't know (0). In the questionnaire for port operators, the port personnel were asked to evaluate their own ports' safety issues with scale: poor (1), average (2), good (3), excellent (4), missing (0).

4.1 Safety in arrival and departure to/from the port

According to the survey for boaters (see figure 19), the most important safety related issues for boaters in port arrival or departure were the following seven issues that scored over 3.0 of maximum 4.0 (see scores in brackets):

- 1. Waterway to port is well marked with proper marks (3.65)
- 2. Port is sheltered from the waves (3.6)
- 3. Information of the port entrance is available (3.43)
- 4. Port is sheltered from the wind (3.33)
- 5. Depth of the waterway to port is marked (3.32)
- 6. Possible anchorage places are marked (3.18)
- 7. General port information is available (3.15)

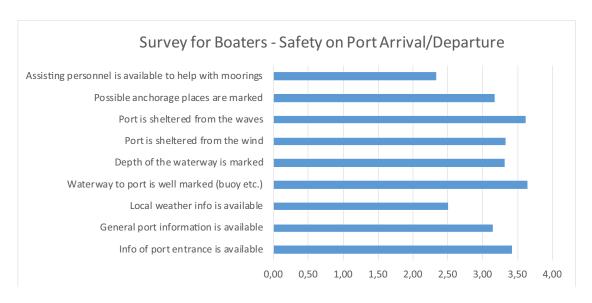


Figure 19. The boaters' opinion about the safety of arrival in ports.

Corresponding responses from port operators were collected (see figure 20). The "missing (0)" choice is included in the calculations. Port operators' self-assessment about how well these issues were handled in the ports were the following:

- 1. Port is sheltered from the waves (3.34)
- 2. Port is sheltered from the wind (3.30)
- 3. Waterway to small port (small port fairway) is marked with official fairway marks (2.93)
- 4. General information available beforehand (2.79)
- 5. Depth of the port waterway is marked (2.00)
- 6. Possible anchorage is clearly marked (1.73)



Figure 20. Operators' opinion about the safety of arrival in ports.

The issues of most importance for boaters are quite well handled in small ports already. However, there are many issues to be handled. For example, the depth markings are missing or the markings are poor in 38% of the ports. If we take into account also the depth markings of the dock, small port basin and berth places, the percentage is even higher. This information is particularly important for sailing boats, since they usually have a higher draft that varies from boat to boat. Depth information is naturally closely related to the fluctuation of the water level and information about its status.

4.2 Safety during port stay

According to the survey for boaters (see figure 21), the five most important aspects of port safety were the following:

- 1. Moorings are solid and reliable (3.68)
- 2. Pier/anchorage is sheltered from the waves (3.58)
- 3. Pier/anchorage is sheltered from the wind (3.31)
- 4. First aid is available if needed (2.82)
- 5. There is proper lighting on the piers (2.63)



Figure 21. The boaters' opinion about the safety of port stay.

Corresponding responses from port operators were collected (see figure 22). Their self-assessment about the three best handled issues were the following:

- 1. Pier/anchorage is sheltered from the waves (3.34)
- 2. Pier/anchorage is sheltered from the wind (3.29)
- 3. Moorings are solid, reliable and in order (3.16)

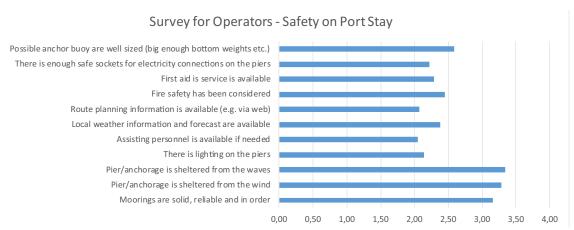


Figure 22. The operators' opinion about the safety of port stay.

The answers show, that the first three port stay-related issues of most importance for boaters are quite well handled in small ports already. According to the surveys, there is room for improvement with first aid services and pier lighting. These issues small port operators should put in order for the upcoming boating season.

In addition to the multiple choice questions, there were also two open ended questions for boaters: one about perceived risks and the other about ideas for improvement. When people answered what they think should be done at different ports, the following issues were addressed:

- Mooring buoy to prevent anchor ropes from getting tangled
- Life-saving equipment with a lifeboat and a safety line
- Existing and clearly marked rescue ladders for climbing up from the water
- Defibrillators for cardiac first aid
- Fire safety: fire extinguishers in ports, and an emergency plan
- Security rules
- Properly lit small port inlets and jetties
- Depth markings: route to the port, dock, berth places
- Webcam to view availability in advance
- Landmark marking
- Electrical safety: More electrical posts "to avoid wiring over everything"
- Clear information boards
- Port staff who can guide to available berths
- Possibility to book small port berth place via internet in advance
- Traffic in the small port: maximum speed limits, enough space to manoeuver, taking into consideration the big boats
- Ways to inform port operator about shortages, such as poor dock or mooring buoy maintenance: moorage, worn securing cables or chains and slippery surfaces
- A safe side mooring berth place for disabled people: the dock could be equipped with a raised part with ramps.

5 APPLICATIONS PROMOTING SAFETY

One outcome of the PortMate project will be an ICT tool for sharing the information gathered and produced during the project. Via the ICT tool, a boater can access the approach videos, for example. The port operators can access the information on best practices and technologies related to resource efficiency in the small ports. The tool would also offer a discussion platform for port operators to share ideas and experiences with other ports. In the tool implementation, the idea is preferably not to make an entirely new application but to extend and develop some existing applications or services.

The following list presents some of the existing applications and services used in Finland and Sweden related to maritime safety:

- The website http://aaltopoiju.fi/ (see figure 23) for desktop or http://m.aaltopoiju.fi/ for mobile devices shows near real time observation data from wave buoys which are located in the Baltic Sea. There is also wind, sea level and temperature observation data from other locations and wave, wind and sea level forecasts. The site can be used in Finnish, Swedish or English.
- The Swedish Maritime Administration (www.viva.se) has stations for real time updated information about wind speed, visibility and water level, all around the coast of Sweden.
 This information is provided free of charge at the website or the free mobile application in Swedish.
- Kustväder is a Swedish mobile application offering weather information for the Swedish coast. The information is provided in Swedish only. Kustväder gives a detailed two-day (hourly) forecast showing wind, waves, current, water temperature, air pressure, rain, visibility, water level and other relevant information. This app also has a unique feature that shows how the ocean looks in different winds and weather conditions.

- The Norwegian Meteorological Institute and the Norwegian Broadcasting Corporation has a free of charge weather online service (www.yr.no). The service is widely used, and the information can be accessed via the website or a mobile application.
- Trossi is a mobile application offered by the Finnish Lifeboat Institution (NGO) which
 contains safety information (such as fairway marks, maritime traffic rules, maritime
 light codes, and emergency instruction); location-based information of the closest sea
 rescue centre, vessel or safety port; sailing route tracking etc. In addition, there is an
 emergency function, which gives your location and other info to the rescue centre when
 calling for help.



Figure 23. Screen capture of Aaltopoiju web page 29.11.2017.

Additionally, there are many applications for information about small port services, such as the following:

- Eniro på sjön (in Swedish) / 0100100 Merellä (in Finnish) is a mobile application for boaters by Eniro. The app provides a nautical chart for Swedish, Finnish and Norwegian waters. The nautical charts are available also via browser in Swedish (https://kartor. eniro.se).
- Gästhamnsguiden is a website (www.gasthamnsguiden.se) and a mobile app (Gästhamnsguiden) for small port visitors in Sweden. The chart is based on Google maps. The service provides basic information about the guest ports and nature ports, such as coordinates, address and link to the port's website if possible.
- The Finnish Vene-magazine has a website service for boaters looking for information about ports (www.venelehti.fi). The platform provides also a commenting possibility for

users to share their opinions and experiences. The chart is based on Google maps, and the service is available in Finnish.

- Venesatamat.fi is a Finnish port application both in mobile and via browser (http://demo. venesatamat.fi). The service provides information about Finnish small ports, such as the coordinates, website address, phone number, depth info, service info and port fees.
 There is also a possibility for boaters to share their experiences and rate the ports.
- Helloports is a web-service for connecting ports and sailors in Finland, Sweden, Estonia and Latvia. The site provides a possibility to book a berth place in a marina, but does not cover all small ports in the area. The service is available in English (www.helloports. com).



In boating, safety should always become first. During the PortMate project's partner meetings, workshops and small port benchmarking, safety has often been the primary topic of discussion. Various safety issues have been noted and discussed in this report.

The PortMate safety questionnaires were conducted in the Spring of 2017. The objective was to gather information on how boaters and port operators see the prevailing situation of port safety, and to hear suggestions for any safety improvements in small ports. The results were briefly presented in chapter 4. In general, people seem to have a positive attitude towards boating safety.

In chapter 3 of this report, the various safety aspects in different small ports were presented. A perfect small port within safety issues must take into account each one of them: safe routes, safe piers, rescue equipment, first aid equipment, electrical safety, environmental safety, as well as robbery and vandalism.

One of the key issues regarding a safe port, are the routes. In a perfect small port, the routes and ports should be well-marked, e.g. there should be depth signs and proper aids to navigation. Most of the information should be available also online, so that the boaters can be prepared for safe approach and mooring. As a solution to provide all the necessary information, the PortMate project is creating an interactive ICT tool, which includes among other funtionality, videos about safe approach to a port, safe stay at a port and a safe departure from a port. The ICT tool will be published later during the project.

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PortMate service questionaire for small port users

Dear Sir/Madam,

We kindly ask you to use 1-2 minutes to give your valuable ideas into our PortMate - project.

Currently common challenges for small ports especially in archipelago and islands are 1) limitations in safe access arrival, stay and departure the port due to less experienced seafarers as well as nature factors such as shallow and rocky routes, 2) lack of sustainable resource efficient services in ports, and 3) insufficient marketing activities separately in each port. In our project, these challenges are solved by mating the pilot small ports with the sailing triangle from Rauma, FI through Sottunga and Kökar, ÅX to Gävle-Söderhamn region, SE. Rauma and Gävle are also official sister cities. These areas have huge potential for visitors to the area both by the nature values and urban services. However, these small ports need practical co-operative actions to improve local and regional mobility and contribute to tourism development.

Our pilot small ports are owned and operated by the cities or private company in Rauma, FI, Sottunga and Kökar (ÅX) and Gävle and Söderhamn (SE). The practical activities in pilot small ports are 1) formation of interactive step-by-step guidance by using ICT solutions, compatible with those existing used by the operators, for seafarers on safe arrival, stay and departure to/from the ports, 2) investments to sustainable and resource efficient infrastructure on land (e.g. solar energy, water, sanitation and WIFI availability), 3) mating the small port operators with each other and with seafarers (local people and visitors) in the small ports to meet the needs for services and their availability as well as co-operation activities i.e. marketing.

Port services

Please grade the importance o				
	Doesn't matter	Some what important	Important	Very important
Toilets				
Toilets for handicaps				
Fresh water				
Fuel				
Waste management				
Sauna				
wimming possibility				
Land connection				
WiFi				
Fire place				
ish washing				
oat ramp				
ishing possibility				
hower				
ath tube				
Grocery store				
estaurant				
Boat wash				
armacy				
Electricity				
Charging				
hildren activities				
hildren play ground				
ightseeing (City or nature)				
Leaflets (mitä tällä haetaan?)				

Proceed

Save

PortMate safety survey for small port operators

Dort	Operator	

We are making a survey about the safety of small ports (guest ports and home ports for leisure). We akindly ask you to use few a minutes to share the information about the safety issues of the small port you are operating. If there are several small ports or natural ports you are responsible for please fill in one form for each port. A similar survey is carried out among boaters. Safety is our common interest.

Survey is part of the PortMate project. PortMate focuses on solutions to promote security issues, sustainable services and on a joint marketing of small ports in the Central Baltic region. This particular survey focus on safety issues.

For more information about the PortMate project: <u>https://www.facebook.com/CBPortMate</u>

NOTE: One inflatable life-vest will be raf fled among the survey participants! The life-vest will be delivered without additional delivery costs only to Finland, Estonia and Latvia.

Thank you for your feedback.

Backo	iround	info	rmatio	r

Name of the port?
Location of the port?
Web site with port information if any?

Arrival and Departure to/from Port

	Poor	Below average	Good	Excellent	Missing	Additional explanation i needed.
General port safety information is available beforehand (max boat sizes etc.)						
General information about the port and port entrance is available beforehand (port map etc.)						
Updated information of the port vacancy situation is available online						
Local weather information is available online						
Waterway to port is marked with of ficial fairway marks (buoy etc.)						
Waterway to port is marked with unof ficial fairway marks						
Depth of the port waterway is marked						
Depth of the dock is marked						
Depth of the berths are marked						
Phone number for the port of fice is on view by the port entrance						
Port is sheltered from the wind						
Port is sheltered from the waves						
Information about available mooring types is available beforehand						
Possible anchorage is clearly marked						
There is enough space for boat maneuvering						
There is assisting personnel to help with moorings						

Stay at the Port

What is the level of following other safety issues in the port?						
, , ,	Poor	Below average	Good	Excellend	Missing	Additional explanation if needed.
Moorings are solid, reliable and in order						
Pier/anchorage is sheltered from the wind						
Pier/anchorage is sheltered from the waves						
There is lighting on the piers						
Assisting personnel is available if needed						
Local weather information and forecast are available						
Route planning information is available (e.g. via web)						
Fire safety has been considered						
First aid is service is available						
There is enough safe sockets for electricity connections on the piers						
Possible anchor buoy are well sized (big enough bottom weights etc.)						

Free word

E-lomake - PortMate safety survey for small port operators

Something else related to safety issues you want to share?

Contact information for the life-vest raf fle

If you want to take part the	to the life-vest raf fle, please leave your contact information.
Name	
E-mail or phone number	

Proceed

5.1.2018

Save

Kysely huvivene- ja luonnonsatamien turvallisuudesta

Hyvä veneilijä ja satamien käyttäjä,

teemme huvi- ja luonnnvenesatamien turvallisuuteen liittyvää selvitystä. Pyydämme, että käyttäisit 1-2 minuuttia vastaksesi selvityksen osana tehtävään kyselyyn.

Kyselytutkimus on osa PortMate -hanketta, missä parannetaan satamien turvallista saavutettavuutta, kestäviä palveluita ja yhteismarkinointia keskeisen Itämeren alueella.

 $Lis \"atietoja\ Port Mate\ hankkeesta\ ja\ arvontaohjeet:\ \underline{https://www.facebook.com/CBPort Mate}$

Huom! Arvomme paukkuliivit (arvo n.100€) kaikkien kyselyyn osallistuneiden kesken. Paukkuliivit lähetetään ilman lisäkustannuksia ainoastaan Suomeen, Ahvenanmaalle, Ruotsiin, Viroon ja Latviaan.

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Paikallinen säätieto ja ennuste ovat saatavilla Reittisuunnittelutietoa on saatavilla					0			0
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Enoughed on outdaying televitations		0			0			0
	Encianua on caatavilla tarvittoocco			1				

Onko sinulla pienvenesatamien turvallisuuteen liittyviä parannusehdotuksia?	
Paukkuliivin arvonta, yhteystiedot	
Jätäthän yhteystietosi, jos haluat os	sallistua paukkuliivien arvontaan. Tietoja käytetään vain arvontaa varten.
Nimi	
sähköpostiosoite tai puhelinnumero	
Tietojen lähetys	
%&"())&	
Kiitos!	

PortMate pienvenesatamien turvallisuus

Hyvä satamaoperaattori

Teemme pienvenesatamien (huvi- ja luonnonvenesatamat) turvallisuuteen liittyvää selvitystä. Pyydämme, että käyttäisitte pari minuuttia vastataksenne tähän selvityksen osana tehtävään kyselyyn sataman pitäjän näkökulmasta. Jos operoitavananne on useampi satama, olkaa hyvä ja täyttäkää yksi lomake jokaisesta eri satamasta. Vastaava kysely teetetään satamien käyttäjille. Turvallisuus on meidän kaikkien yhteinen asia.

Kyselytutkimus on osa PortMate -hanketta, missä parannetaan pienvenesatamien ti Itämeren alueella.	urvallista saav	vutettavuutta	a, kestäviä palve	eluita ja yh	teismarkino	intia keskeisen
Lisätietoja PortMate hankkeesta: https://www.facebook.com/CBPortMate						
Huom! Arvomme paukkuliivit (arvo n.100€) kaikkien kyselyyn osallistuneiden kesken Ahvenanmaalle, Ruotsiin, Viroon ja Latviaan.	. Paukkuliivit	lähetetään i	lman lisäkustan	nuksia ain	oastaan Su	omeen,
Kiitos arvokkaista tiedoistanne.						
austakysymykset						
Sataman nimi?						
Sataman sijainti?						
Sataman www- tai facebook sivut, jos olemassa?						
Satamaan saapuminen ja lähteminen						
Mikä on arvionne mukaan seuraavien saapumiseen ja lähtemiseen liittyvien turvalli					Donathon	Mahal liaskannantit
Tietoa sataman turvallisuudesta on saatavilla etukäteen (esim. maks. venekoot)	Heikko	Välttävä		mainen	Puuttuu	Mahd. lisäkommentit
Tietoa sataman sisääntulosta on saatavilla etukäteen (esim. kartta, syvyystiedot)	0	0	_)	0	
Ajantasainen sataman täyttöastetieto on nähtävissä esim. netistä	0	0	0 (0	
Paikalliset säätiedot ovat saatavilla netin kautta	0	0	0 (0	
Satamaväylä on merkattu virallisilla väylämerkeillä	0	0	0 (0		
Satamaväylä on merkattu epävirallisilla väylämerkeillä	0	0	0 (0	
Satamaväylän syvyys on merkattuna näkyviin	0	0	0 (0	0	
Satama-altaan syvyys on merkattuna näkyviin	0	0	0 (0	0	
Venepaikkojen syvyydet on merkattuna näkyviin	0	0	0 (0	
Satamatoimiston puhelinnumero on näkyvissä satamaan saapuessa	0	0	0 (0	
Satama on suojassa tuulelta	0	0	0 (0	
Satama on suojassa aallokolta	0	0	0 (0	
Tieto kiinnittymismahdollisuuksista on saatavilla etukäteen	0	0	0 (0	
Mahdolliset akkuripaikat on merkattu	0	0	0 (0	
Satamassa on riittävästi tilaa veneen manööveeraukseen	0	0	0 (0	
Satamassa on henkilökuntaa auttamassa kiinnittymisessä	0	0)	0	
Satamassa viipyminen						
Mikä on arvionne mukaan seuraavien muiden turvallisuusasioiden taso satamassa	?					
Heikl			Erinomainen	Puuttu	u Mah	d. lisäkommentit
Laiturit/Kiinnittymispaikat ovat asianmukaiset ja kunnossa		0	0	0		
Laiturit/Kiinnittymispaikat ovat suojassa tuulelta		0	0	0		
Laiturit/Kiinnittymispaikat ovat suojassa aallokolta		0	0	0		
Kiinnityslaituri on valaistu	0	\circ	\circ	0		
Satamassa on avustavaa henkilökuntaa saatavilla	0	\circ	\circ	0		
Paikallissää- ja sääennustetiedot ovat saatavilla	0	\circ	\circ	\circ		
Reittisuunnittelutietoa on saatavilla (esim. netin kautta)	0	\circ	0	0		
Paloturvallisuusasiat on huomioitu	0	\circ	0	\circ		
					·	

Satamassa on ensiapua saatavilla tarvittaessa Laiturilla on riittävästi turvallisia sähköpistokepaikkoja Mahdolliset ankkuripoijut on riittävästi mitoitetut (riittävä pohjapaino jne.)	0	0	0	0	0	
Sana vapaa						
Muuta aiheeseen liittyvää sanottavaa?						
			//			
Paukkuliivin arvonta, yhteystiedot						
Jätäthän yhteystietosi, jos haluat osallistua paukkuliivien arvontaan.						
Nimi						
Sähköpostiosoite tai puhelinnumero						
Tietojen lähetys						
F##\$%%6°						

Enkät om säkerheten för småbåtshamnar

Bästa båtägare och/eller användare av småbåthamnar!

Vi undersöker småbåtshamnar med fokus på säkerhet. Vi ber dig att använda några minuter och ge oss dina synpunkter.

Enkäten är en del av ett EU-projekt kallat PortMate. Projektet handlar om att förbättra säkerheten, att främja miljövänliga och hållbara tjänster och om gemensam marknadsföring av gästhamnar i centrala Östersjöregionen.

 $Mer \ information \ om \ PortMate \ projektet \ se: \ \underline{https://www.facebook.com/CBPortMate}$

ack för dina synpunkter!							
akgrund							
Kvinna Man Annan							
Markera O O							
älj ditt födelseår							
in hemort							
in hemmahamn, om någon							
nkomst till hamnen							
–Välj hur viktigt följande förhållanden är vid ankomst till hami	nen.						
	Inte viktigt	Lite viktigt	Viktig		riktigt	Vet inte	
Man kan hitta information om hamninloppet	0	0	0	0		0	
Man kan hitta allmän information om hamnen	0	0	0	0		0	
Man kan hitta information om lokala väderförhållanden	0	0	0	0		0	
Hamninloppet är välmarkerat			\circ	0		\circ	
Hamninloppets djup är tydligt utmärkt	\circ	\circ	\circ	0		0	
Hamnen är skyddad från vinden	\circ	\circ		0		0	
Hamnen är skyddad från vågor	\circ	\circ	0	0		0	
Möjliga förtöjningsplatser är välmarkerade	\circ	0		0		0	
Det finns personal tillgänglig	0	0	0	0		0	
ppehåll i hamnen							
–Välj hur viktigt följande förhållanden är vid uppehåll i hamne	en						
		Inte	riktigt	Lite viktigt	Viktig	Mycket viktig	gt Vet inte
Angöringsplatsen är tillförlitlig och robust.				0	0	0	0
Angöringsplatsen är skyddad för vind				0	0	0	0
Angöringsplatsen är skyddad för vågor				0	0	0	0
Kajer och pirar är belysta					0	0	0
Det finns personal tillgänglig				\circ	\circ	0	0
Man kan finna information om lokala väderförhållanden och	n väderprogr	noser			\circ		\circ
Man kan hitta information för ruttplanering					\circ		\circ

Egen k	ommentaı
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Vilka andra risker ser du när det gäller att säkert angöra hamnar?

Har du förslag som kan förbättra säkerheten i småbåtshamnar?/ gästhamnar?	2	
Utlottning av uppblåsbar flytväs	t, kontaktinformation	
Lämna kontaktuppgifter om du vill	delta i utlottningen av en flytväst. Informationen användas endast i detta syfte.	
Namn		
e-postadress eller telefonnummer		
Skicka		
%&'(&)*+,,-'./012)		
Tack!		

Enkät om säkerheten för småbåtshamnar

Bästa hamnoperatör!

Vi undersöker småbåtshamnar med fokus på säkerhet. Vi ber er att använda några minuter och delge oss information om din hamn. Om ni ansvarar för flera hamnar, fyll i en blankett för varie hamn. En liknande enkät genomförs också bland håtägare. Säkerhetfrånor är gemensam sak för oss alla

for varje namn. En liknande enkat genomfors också bland batagare. Sakernettra	agor ar ge	emensam sak	or oss all	a.						
Enkäten är en del av ett EU-projekt kallat PortMate. Projektet handlar om att för gästhamnar i centrala Östersjöregionen.	bättra sä	kerheten, främ	ija miljövä	inliga och h	ållbara tjäns	ter och o	m gei	mensam ma	rknadsförin	g av
Mer information om PortMate projektet se: https://www.facebook.com/CBPortM	<u>Mate</u>									
Obsl En uppblåsbar flytväst (värde ca. 1000 SEK) utlottas bland deltagarna i un och Lettland.	dersöknir	ngen, se enkät	en. Flytvä	isten kan e	nbart sändas	s till adres	seri	Sverige, Åla	nd, Finland,	Estland
Tack för din insats!										
Bakgrund										
Hamnens namn?										
Hamnens position?										
Hamnens webbplats, om någon?										
Ankomst till hamnen										
Välj standard av följande förhållanden vid ankomst till hamnen							_			
				Dâ	-		Bra	Utmärkt	Saknas	Kommenta
Man kan hitta säkerhetsinformation om hamnen i förväg (t.ex. om max båtsto							0	0	0	
Man kan hitta information om hamninloppet i förväg (t.ex. om karta om hamni Man kan hitta updaterad information om reserverade platser och hamnens be		accituationen /	tov nå n				0	0	0	
Man kan hitta updaterad information om reserverade platser och namnens be Man kan hitta information om lokala väderförhållanden	elaggnings	sssituationen (t.ex. pa n	atet)			0	0	0	
							0	0	0	
Hamninloppet är markerat med officiella farledsmärken							_	_	0	
Hamninloppet är markerat med inofficiella farledsmärken						0	0			
Hamninloppets djup är markerat										
Hamnbassängens djup är markerat										
Båtplatsernas djup är markerat Telefonnummer till hamnkontoret är väl synpunkt för ankommande båtägare										
Telefonnummer till hamnkontoret är väl synpunkt för ankommande båtägare							0	0	0	
Hamnen är skyddad från vinden							0	0	0	
Hamnen är skyddad från vågor							_			
Man kan hitta information om möjliga förtöjning sätt i förväg							0	0	0	
Möjliga förtöjningsplatser är markerade							0	0	0	
Det finns till tillräckligt utrymme för att manövrera i hamnen							0	0	0	
Det finns personal tillgänglig)	0	0	0	
Uppehåll i hamnen										
Välj standard för följande förhållanden vid uppehåll i hamnen										
	Dålig	Nödtorftig	Bra	Utmärkt	Saknas	Komm	entar,	om någon		
Angöringsplatsen är tillförlitlig och robust	0	0	0	0	0					
Angöringsplatsen är skyddad för vind	0	0	0	0	0				_	
Angöringsplatsen är skyddad för vågor	0	0	0	0	0					
Kajer och pirar är belysta	0	0	0	0	0					
Det finns personal tillgänglig	0	0	0	0	0				_	
Man kan finna information om lokala väderförhållanden och väderprognoser	\circ	\circ	\circ	0	\circ					
Man kan hitta information för ruttplanering	0	0	\circ	0	0					
Brandsäkerhen är beaktad i hamnen	\circ	0	\circ	0	0					
Det finns första hjälp i hamnen	\circ	\circ	\circ	0	0					
Det finns tillräcklig antal av säkra eluttag på kajer och pirar	0	0	\circ	\circ	\circ					
Ankarbojar är väldimensionerat (tillräcklig vigt i botten)	Ankarbojar är väldimensionerat (tillräcklig vigt i botten)									
Egen kommentar										

Något	annat	att	tillföra	1?

Utlottning av uppblåsbar flytväst	t, kontaktinformation	
Lämna kontaktuppgifter om du vill o	delta i utlottningen av en flytväst. Informationen användas endast i d	etta syfte.
Namn e-postadress eller telefonnummer]
Skicka		
!"#\$"%&'(()#*+,%		
Tack!		

This report provides general information about the relevant factors creating port safety, and it includes the perspectives of both the boaters and the port operators. Actions of the port operators play a big role in this matter, but also the boaters must keep in mind that a safe port requires every visitor's contribution in creating safety.

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